



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/048,185	06/17/2002	Pascual Perez	34934-PCT-USA 072667.0180	2915
21003	7590	12/13/2006	EXAMINER ROBINSON, KEITH O NEAL	
BAKER & BOTTS L.L.P. 30 ROCKEFELLER PLAZA 44TH FLOOR NEW YORK, NY 10112-4498			ART UNIT 1638	

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/048,185

Applicant(s)

PEREZ ET AL.

Examiner

Keith O. Robinson, Ph.D.

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18,23-25 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18,23-25 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 18, 2006 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. Claims 1-17, 19-22 and 26 have been canceled without prejudice and claim 18 has been amended.
3. Claims 18, 23-25 and 27 are under examination.

Response to Arguments

4. Applicant's amendments and arguments with respect to the 35 USC § 112, first paragraph regarding lack of enablement of claims 18, 23-25 and 27 as applied to claims 18-19 and 20-27 in the Office Action mailed June 14, 2006 have been fully considered and are persuasive (see pages 4-5, paragraph # 1 of 'Remarks' filed September 18, 2006). The rejection has been withdrawn.
5. Applicant's amendments and arguments with respect to the 35 USC § 112, first paragraph regarding lack of written description of claims 18, 23-25 and 27 as applied to claims 18-19 and 20-27 in the Office Action mailed June 14, 2006 have been fully

considered and are persuasive (see pages 5-6, paragraph # 2 of 'Remarks' filed September 18, 2006). The rejection has been withdrawn.

6. Applicant's cancellation of claims 19 and 20 has rendered the 35 USC § 102 rejection of the Office Action mailed June 14, 2006 (see pages 5-6) moot. The rejection has been withdrawn.

Claim Rejections - 35 USC § 103

7. Claims 18, 23-25 and 27 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida et al (Nature Biotech 14: 745-750, 1996), in view of Does et al (Plant Mol. Biol. 17: 151-153, 1991), Hiei et al (Plant J. 6(2): 271-282, 1994), Armstrong et al (Theor. Appl. Genet. 84: 755-762, 1992) and Ragot et al (Techniques et utilisations des marqueurs moléculaires, pages 45-56, 1994). The rejection is repeated for reasons of record as set forth in the previous Office Action mailed June 14, 2006, as applied to claims 18-27 (see pages 6-8).

Applicant argues that the pending rejection fails to establish *prima facie* obviousness because all the claim limitations are not taught (see page 7, 3rd paragraph of 'Remarks' filed September 18, 2006).

This is not persuasive. As stated in the Office Action mailed June 25, 2004, the cited references meet all the claim limitations (see page 16, 1st full paragraph to page 17, end of last paragraph).

Applicant argues that none of the cited references, when considered singly or in combination, suggest a specific step for the positive identification of a transgenic plant

that contains T-DNA integrated only into the genome of the line of interest (see page 8, 2nd paragraph of 'Remarks' filed September 18, 2006).

This is not persuasive. As stated in the Office Action mailed June 25, 2004, Does et al teach a method of obtaining T-DNA in the genome of plants to amplify plant genomic DNA sequences flanking the known T-DNA sequences (see page 16, 2nd paragraph). In addition, how the selection is performed does not affect the principle component of the claimed step, which is selecting for at least one individual which has T-DNA integrated into the genome of interest.

In response to applicant's argument, that the combined cited references teach that obtaining an isotransgenic plant merely requires the application of adequate selection pressure at each stage of the backcross so that undesired genetic elements are crossed out (see page 8, 3rd paragraph of 'Remarks' filed September 18, 2006), the fact that Applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Applicant argues that based on the teachings of Ragot regarding backcrossing, the combined cited references demonstrate that the results would not have been expected (see page 9, last two paragraphs of 'Remarks' filed September 18, 2006).

This is not persuasive. The Examiner has provided references that provide evidence that it would have been obvious to one of ordinary skill in the art to use the cited references to make the claimed invention (see pages 15-18 of the Office Action

mailed June 25, 2004). In fact, the teachings of Ragot et al are the motivation for one of ordinary skill in the art to combine the cited references because Ragot et al teach the desirability of isogenic maize lines containing a gene of interest and maintaining the genome of an elite agronomic line.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 18, 23-25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lundquist et al (U.S. Patent No. 5,508,468, April 16, 1996), in view of Chyi et al (Mol. Gen. Genet. 204: 64-69, 1986).

The claims read on a method for producing an isotransgenic maize line comprising transforming cells of a hybrid plant, the parental lines of which are a maize

line of interest and a maize line suited for transformation, with a vector comprising a T-DNA containing a transgene in order to obtain hybrid primary transformants, wherein said maize line suited to transformation is chosen from the group comprising A188 and Hi-II maize lines, selecting for at least one individual among said hybrid primary transformants, wherein said selection is performed by isolation and identification of genomic sequences of the host adjacent to the T-DNA, using RFLP, backcrossing said individuals with said parental maize line of interest and selecting at least one transgenic individual obtained from the backcross.

Lundquist et al teach a method for producing transgenic maize plants wherein said method comprises transforming cells of hybrid immature embryos, wherein said hybrid is produced by pollination of inbred line A188, a maize line suited for transformation, and inbred line B73, a maize line of interest (see column 17, line 49 to column 21, line 18 and Table 3).

Lundquist et al do not teach selection performed by isolation and identification of genomic sequences of the host adjacent to the T-DNA using RFLPs, backcrossing individuals to parental maize line of interest and selection of one transgenic individual obtained from the backcross.

Chyi et al teach using RFLPs to identify genomic sequences of the host adjacent to the T-DNA in tomato and backcrossing individuals to parental lines (see page 65, 1st column, 3rd paragraph to 2nd column, end of 1st full paragraph). One of ordinary skill in the art would understand how to select at least one transgenic individual from a backcrossing method.

Art Unit: 1638

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of Applicant's invention to combine the teachings of Lundquist et al with those of Chyi et al to produce an isotransgenic maize line.

One of ordinary skill in the art would have been motivated to combine these teachings because Lundquist et al teach "[g]enetic engineering of plants...offers considerable promise to modern agriculture and plant breeding" (see column 1, lines 22-26).

In addition, one of ordinary skill in the art would have a reasonable expectation of success based on the success of Lundquist et al in producing transgenic maize lines and the success of Chyi et al in using RFLPs to locate genomic sequences.

Conclusion

11. No claims are allowed.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith O. Robinson, Ph.D. whose telephone number is 571-272-2918. The examiner can normally be reached on Monday - Friday 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 1638

published applications may be obtained from either Private PAIR or Public PAIR.

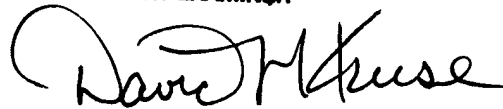
Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Keith O. Robinson, Ph.D.

November 8, 2006

DAVID H. KRUSE, PH.D.
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read "David H. Kruse", written in a cursive style.